

Stochastic equation of the technological process

Pihnastyi Oleh

Department of distributed information systems and cloud technologies

National Technical University "KhPI"

Kharkiv, Ukraine

pihnastyi@gmail.com

Khodusov Valery

Department of Theoretical Nuclear Physics and Higher Mathematics

V.N. Karazin Kharkiv National University

Kharkiv, Ukraine

vkhodusov@ukr.net

Abstract— This document presents the construction of a stochastic equation for the process of manufacturing products on a production line. We base our research on the synchronized production line. The minimum size of the inter-operational storage is determined, at which the continuous production is possible. The stochastic equation of the production process is written in canonical form. The definition of the diffusion coefficient for the time of processing of subjects of labour.

Keywords— *the subject of labour, PDE-model, production cycle, mass production, work in progress, balance equations, production line, flow line, stochastic equation, Ito equation, diffusion coefficient, processing time.*

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